

IN THE CLAIMS

1. (Currently Amended) An inspection method for a semiconductor circuit with a plurality of connected semiconductor devices comprising the steps of applying an electrical load on the circuit, taking a photograph of the circuit with a thermographic camera to detect heat development of each semiconductor device in response to the applied load, and processing the photograph to determine the temperature of the semiconductor devices for and determining the quality of circuit and semiconductor devices based on the heat development solely from the temperature measurement.

2. (Original) The inspection method for a semiconductor circuit according to claim 1, wherein at least some of the semiconductor devices are connected in parallel.

3. (Original) The inspection method for a semiconductor circuit according to claim 1, wherein temperatures of the semiconductor devices are measured at different points of time, and the quality of the circuit and semiconductor devices is determined based on the temperature difference.

4.(Previously Amended) An inspection method for a semiconductor circuit with a plurality of connected semiconductor devices comprising the steps of applying an electrical load on the circuit different points of time at least twice, taking a photograph of the circuit with a thermographic camera to detect heat development of each semiconductor device in response to each of the applied loads to detect the heat development characteristic of each semiconductor device, and the quality the circuit and semiconductor devices is determined based on the heat development characteristic, together with the cause if the circuit and semiconductor devices is determined to be defective.

5.The inspection method for a semiconductor circuit according to claim 4, wherein said semiconductor devices are power controlling power devices installed in a rotating equipment control unit.

6. (Currently Amended) An inspection apparatus for a workpiece consisting of a semiconductor circuit with a plurality of connected semiconductor comprising an apparatus body on which a workpiece to be inspected is set, a loading circuit for applying load corresponding to the condition of use to the workpiece, a power source for supplying a working current to the workpiece through said loading circuit, a drive waveform generating circuit for applying a drive signal to said workpiece, a thermographic camera for taking photographs of the workpiece set on said apparatus body, an image processor connected to said thermographic camera for determining the temperatures of said semiconductor devices solely from the output of said thermographic camera and determining the

quality of circuit and semiconductor devices based solely on the temperature measurement, and a control for controlling said inspection apparatus to perform an inspection program.